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Nebraska Tractor Tests

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Larsen

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January 1929

## Test 165: Four Drive Model E 15-25

Tractor Museum

University of Nebraska-Lincoln, [TractorMuseumArchives@unl.edu](mailto:TractorMuseumArchives@unl.edu)

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UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT  
AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 165

Dates of test: July 1st to 17th, 1929

Name, model and rating of tractor: Four Drive Model "E" 15-25

Manufacturer: Four Drive Tractor Company, Big Rapids, Mich.

B R A K E H O R S E P O W E R T E S T S

:Crank	:	Fuel Consumption	:	Water consumption	:	Temp.	:		:
:shaft	:		:	per hour gallons	:	Deg. F.	:	Barometer	:
H. P.	:	speed	:	Gals.	:	H. P.	:	Lbs. @	:
:	:	R.P.M.	:	per	:	hrs. @	:	H. P.	:
:	:	:	:	hour	:	gal.	:	hour	:
:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:

OPERATING MAXIMUM LOAD TEST. ONE HOUR (98.5% of maximum load)

28.42:1100	:	3.945	:	7.20	:	0.952	:	0.0	:	0.0	:	0.0	:	190	:	75	:	28.77	:
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RATED LOAD TEST. ONE HOUR

25.29:1105	:	3.598	:	7.03	:	0.976	:	0.0	:	0.0	:	0.0	:	179	:	75	:	26.78	:
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\*VARYING LOAD TEST. TWO HOURS

25.23:1103	:	3.551	:	7.11	:	0.966	:	0.0	:	0.0	:	0.0	:	177	:	74	:		:
1.30:1151.5	:	1.277	:	1.02	:	6.738	:	0.0	:	0.0	:	0.0	:	186	:	74	:		:
12.83:1119	:	2.230	:	5.75	:	1.193	:	0.0	:	0.0	:	0.0	:	180	:	74	:		:
26.72:1101	:	3.813	:	7.01	:	0.979	:	0.0	:	0.0	:	0.0	:	184	:	75.5	:		:
6.49:1128	:	1.697	:	3.82	:	1.794	:	0.0	:	0.0	:	0.0	:	175.5	:	76	:		:
19.20:1117	:	3.000	:	6.40	:	1.072	:	0.0	:	0.0	:	0.0	:	174	:	77	:		:
15.42:1119	:	2.595	:	5.94	:	1.154	:	0.0	:	0.0	:	0.0	:	179	:	75	:	28.80	:

\*20 minute runs. Last line is average for two hours.

D R A W B A R H O R S E P O W E R T E S T S

:Draw	:	Speed	:	Crank	:	Slip	:	Fuel Consumption	:	Water	:	Temp.	:		:
:Bar	:	miles	:	shaft	:	on	:	H. P. : Lbs.	:	used	:		:	Barometer	:
H. P.	:	pull	:	per	:	speed	:	drive	:	Gal.	:	hr.	:	per	:
:	:	pounds	:	hour	:	R.P.M.	:	wheels	:	per	:	per	:	H.P.	:
:	:	:	:	:	:	:	:	%	:	hour	:	gal.	:	hour	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

RATED LOAD TEST. TEN HOURS. Intermediate GEAR.

15.18:1639	:	3.47	:	1089	:	2.53	:	3.607	:	4.21	:	1.630	:	0.08	:	185	:	84	:	28.83	:
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MAXIMUM LOAD TEST

17.68:1879.5	:	3.53	:	1111	:	2.97	:	-----	:	Not recorded	:	-----	:	192	:	87	:	28.92	:
18.97:3022.5	:	2.35	:	1106	:	6.74	:	-----	:	"	:	-----	:	186	:	86	:	28.95	:
7.76:405.5	:	7.17	:	1106	:	0.05	:	-----	:	"	:	-----	:	176	:	88	:	28.90	:

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BRIEF SPECIFICATIONS

MOTOR: Make Waukesha Serial No. 169770 Type 4 cylinder, vertical  
Head "L" Mounting Lengthwise  
Bore and stroke: 4-3/8 x 5 3/4 in. Rated R.P.M. 1100  
Port. Dia. Valves: Inlet 2" Exhaust 2"  
Belt pulley: Diam. 12 in. Face 8 in. R.P.M. 1100  
Magneto: American Bosch Model "U4 Ed1"  
Carburetor: Kingston Model "L3" Size 1 1/4"  
Governor: Waukesha No. ----- Type fly-ball  
Air Cleaner: Donaldson Type oiled fiber  
Lubrication: Pressure and splash

CHASSIS: Type 4 Wheels all drivers Serial No. 3017 Drive enclosed  
gear  
Clutch: Twin Disc Type dry disc operated by hand  
Advertised speeds, miles per hour: Low 2.10  
Intermediate 3.10 High 6.00 Reverse 3.90  
Drive wheels: Diameter 40" Face 12"  
Lugs: Type Spade No. per wheel 22 Size 4"High x 3 1/2"Face  
Extension rims: Width None Seat Upholstered  
Total weight as tested (with operator) 6503 pounds.

FUEL AND OIL

Fuel Kerosene Weight per gallon 6.86  
Oil: Mobiloil B To fill crankcase 2 gallon  
Additional amount used during test 1/4 gallons  
Total number of hours of test 46

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REPAIRS AND ADJUSTMENTS

After the limber up run and before the official tests were made, the clutch was adjusted, the felt washers in the front wheels and the steering apparatus were adjusted to turn an equal amount in both directions. During the rated drawbar test the clutch was again adjusted.

REMARKS

The tests herein reported were conducted with one carburetor setting which remained unchanged throughout the tests. This condition should be recognized when comparing this test with any Nebraska test conducted prior to 1928.

In the advertising literature submitted with the specifications and application for test of this tractor we find no claims and statements which, in our opinion, are unreasonable or excessive.

The results of this test indicate that the rating of this tractor does not exceed the provisions of the tractor rating code of the American Society of Agricultural Engineers and the Society of Automotive Engineers.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 165.

Lew Wallace  
Engineer-in-Charge

E. E. Brackett

C. W. Smith

E. B. Lewis  
Board of Tractor Test Engineers